

**REMARKS**

The Office Action dated January 24, 2007, has been received and carefully considered. In this response, claims 1, 2, 17, 19, 23, 25, 26, 31, 33, 35, and 37 have been amended and claims 18, 22, and 24 have been cancelled without prejudice. Entry of the amendments to claims 1, 2, 17, 19, 23, 25, 26, 31, 33, 35, and 37 and the cancellation of claims 18, 22, and 24 without prejudice is respectfully requested. Reconsideration of the outstanding objections/rejections in the present application is also respectfully requested based on the following remarks.

I. THE ALLOWANCE/ALLOWABILITY OF CLAIMS 1-16, 18, 21, 22, 24, 25, 27-30, AND 31-55

Applicant notes with appreciation the indication on page 6 of the Office Action that claims 31-55 are allowed. Applicant notes with equal appreciation the indication on page 6 of the Office Action that claims 1-16, 18, 21, 22, 24, 25, and 27-30 would be allowable if rewritten to overcome the objection of claim 1 or in independent form including all of the limitations of the base claim and any intervening claims. Claims 1, 17, 19, and 23 have been amended substantially in this manner, and thus should now be allowable. Claim 26 has been amended as discussed below and should also now be allowable. Acknowledgment of same is respectfully requested.

II. THE OBJECTION TO CLAIM 1

On page 2 of the Office Action, claim 1 was objected to for not defining several acronyms.

Claim 1, as well as claims 2, 17, 19, 23, 26, 31, 33, 35, and 37, have been amended to address the Examiner's concerns.

In view of the foregoing, it is respectfully requested that the aforementioned objection to claim 1 be withdrawn.

III. THE INDEFINITENESS REJECTION OF CLAIMS 18 AND 26-30

On page 2 of the Office Action, claims 18 and 26-30 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the invention. This rejection is hereby respectfully traversed with amendment.

Claim 18 has been cancelled and claim 26 has been amended to address the Examiner's concerns.

In view of the foregoing, it is respectfully requested that the aforementioned indefiniteness rejection of claims 18 and 26-30 be withdrawn.

IV. THE OBVIOUSNESS REJECTION OF CLAIM 17

On pages 3-4 of the Office Action, claim 17 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Zhang (U.S. Patent No. 6,614,371) in view of Gorecki et al. (U.S. Patent Application Publication No. US2003/0194016A1). This rejection is hereby respectfully traversed with amendment.

Regarding claim 17, the Examiner asserts that Zhang teaches the claimed invention, except for a multi-PAM input signal which is taught by Gorecki et al. Applicants respectfully disagree. However, in order to further the present application toward allowance, Applicants have amended claim 17 to substantially incorporate the limitations of claim 18, which the Examiner has indicated as being allowable. Accordingly, is it respectfully submitted that claim 17, as amended is allowable over Zhang and Gorecki et al., either alone or in combination.

In view of the foregoing, it is respectfully requested that the aforementioned obviousness rejection of claim 17 be withdrawn.

V. THE OBVIOUSNESS REJECTION OF CLAIM 19 AND 20

On pages 4-5 of the Office Action, claims 19 and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Jaussi et al. (U.S. Patent No. 6,825,696) in view of Gorecki et

al. (U.S. Patent Application Publication No. US2003/0194016A1).

This rejection is hereby respectfully traversed with amendment.

Regarding claim 19, the Examiner asserts that Jaussi et al. teaches the claimed invention, except for a multi-PAM input signal which is taught by Gorecki et al. Applicants respectfully disagree. However, in order to further the present application toward allowance, Applicants have amended claim 19 to substantially incorporate the limitations of claim 22, which the Examiner has indicated as being allowable. Accordingly, it is respectfully submitted that claim 19, as amended is allowable over Jaussi et al. and Gorecki et al., either alone or in combination.

Regarding claim 20, this claim is dependent upon independent claim 19. Thus, since independent claim 19 should be allowable as discussed above, claim 20 should also be allowable at least by virtue of its dependency on independent claim 19. Moreover, claim 20 recites additional features which are not disclosed, or even suggested, by the cited references taken either alone or in combination.

In view of the foregoing, it is respectfully requested that the aforementioned obviousness rejection of claims 19 and 20 be withdrawn.

VI. THE OBVIOUSNESS REJECTION OF CLAIM 23

On pages 5-6 of the Office Action, claim 23 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Horan et al. (U.S. Patent No. 6,462,623) in view of Gorecki et al. (U.S. Patent Application Publication No. US2003/0194016A1). This rejection is hereby respectfully traversed with amendment.

Regarding claim 23, the Examiner asserts that Horan et al. teaches the claimed invention, except for a multi-PAM input signal which is taught by Gorecki et al. Applicants respectfully disagree. However, in order to further the present application toward allowance, Applicants have amended claim 23 to substantially incorporate the limitations of claim 24, which the Examiner has indicated as being allowable. Accordingly, it is respectfully submitted that claim 23, as amended is allowable over Horan et al. and Gorecki et al., either alone or in combination.

In view of the foregoing, it is respectfully requested that the aforementioned obviousness rejection of claim 23 be withdrawn.

VII. CONCLUSION

In view of the foregoing, it is respectfully submitted that the present application is in condition for allowance, and an

early indication of the same is courteously solicited. The Examiner is respectfully requested to contact the undersigned by telephone at the below listed telephone number, in order to expedite resolution of any issues and to expedite passage of the present application to issue, if any comments, questions, or suggestions arise in connection with the present application.

To the extent necessary, a petition for an extension of time under 37 CFR § 1.136 is hereby made.

Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-0206, and please credit any excess fees to the same deposit account.

Respectfully submitted,

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